

## TWO NEW SPECIES OF SYLLIDAE (POLYCHAETA) FROM TENERIFE (CANARY ISLANDS, SPAIN)

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### ABSTRACT

Two new species of Syllidae (Polychaeta) are described from Canary Islands. *Pionosyllis dionisi* new species is characterized by having short antennae and dorsal cirri, strongly articulated anteriorly and smooth posteriorly and in midbody; compound setae with thin, bidentate blades, with dorsoventral gradation, and solitary posterior acicula with a rounded tip and provided with a short mucron. *Syllis cruzi* new species is characterized by having compound setae which is strongly bidentated with the proximal tooth longer than distal tooth, and short spines on cutting margin, except distally. The two new species are discussed and compared with similar species of each genus.

Historical records, where the first data on the syllids of the Canary Islands are found, go back to last century. Langerhans (1881) was first to study the family Syllidae. Recently Núñez et al. (1984) published the first catalogue on Polychaeta from the Canarian fauna, where 148 species were recorded, 22 of which belong to the family Syllidae.

In 1976, Núñez began a study of the polychaetes from the Canary coast and the results that concerned the family Nereidae (Núñez et al., 1981; 1984) have already been published, while others are in press (Syllidae: Eusyllinae and Autolytinae; Phyllocoptida: Chrysopetalidae, Pisionidae, Glyceridae, Sphaerodoridae, Hesionidae and Pilargidae). This paper deals with two new species of Syllidae, found during the above mentioned study.

### MATERIAL AND METHODS

For both new species, the material studied was mostly collected from nearlittoral coralligenous bottom. Sampling stations description, methods and a map of the collection sites in the Canary Islands were given in Núñez (1990). Measurements refer to either the holotype or the largest specimen studied; body width is measured at the proventricular level and excluded cirri, parapodia or setae. Microscopic preparations of some complete specimens and parapodia were made in glycerine jelly. Observations, camera-lucida drawings and measurements were made using a microscope with differential interference contrast optics (Nomarsky).

Types are deposited at the Insular Museum of Natural Science of Santa Cruz de Tenerife (TFMC).

The study of polychaetous annelids from the Canary Islands has been conducted by the Department of Animal Biology (Zoology) of the Universidad de La Laguna, Tenerife, Canary Islands, Spain, and the Department of Biology (Zoology) of the Universidad Autónoma de Madrid, Spain.

#### *Pionosyllis dionisi* new species

Figure 1a-f

*Material Examined.*—Candelaria (Tenerife); *Dendrophyllea ramea*; 115 m depth; holotype (TFMC AN 0177). Tabaiba (Tenerife); *Dendrophyllea ramea*; 102 m depth; paratype (TFMC AN 0181).

*Description.*—Holotype and paratype lack far posterior end. Body long, slender, without color, 5 mm long, 0.3 mm wide for 39 setigers. Prostomium pentagonal with four small eyes in open trapezoidal arrangement and two anterior eyespots. Antennae thick, shorter than prostomium and palps, strongly articulated; median antenna with about 15 articles originating between posterior pair of eyes; lateral antennae shorter, with about 9 articles, originating between anterior eyes and eyespots. Palps stout, divergent, fused at base, slightly longer than prostomium (Fig. 1a). Tentacular segment dorsally reduced; dorsal tentacular cirri similar in

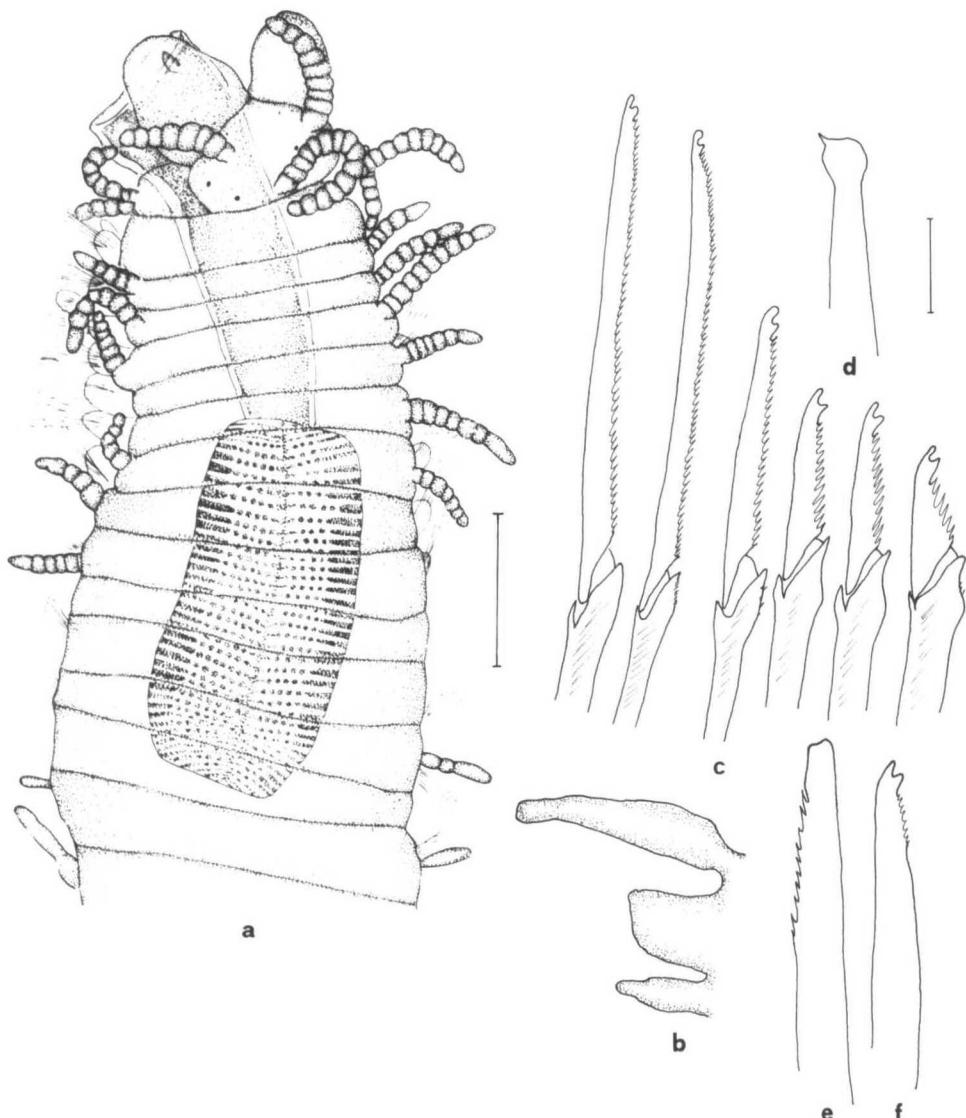


Figure 1. *Pionosyllis dionisi* new species: a, anterior end, dorsal view of holotype; b, medium-posterior parapodium; c, compound setae; d, acicula, posterior parapodium; e, dorsal simple seta; f, ventral simple seta. Scale: a, 130  $\mu\text{m}$ . b, 32  $\mu\text{m}$ . c-f, 10  $\mu\text{m}$ .

length and shape to lateral antennae; ventral tentacular cirri shorter. Dorsal cirri of anterior segments shorter than half of body width, articulated, alternating longer dorsal cirri, with about eight to nine articles, and shorter dorsal cirri, with about six to seven articles; from proventricular level onwards, dorsal cirri progressively less articulated, becoming completely smooth on remaining segments, slightly longer than parapodial lobes, but shorter than setae, shape cylindrical to pyriform. Ventral cirri pyriform, length similar to parapodial lobes (Fig. 1b). Compound setae heterogomph, shaft endings somewhat spinose, similar throughout body, in shape and length. Blades all similar, slender, bidentate, with short, uniform spines on cutting margin, somewhat directed distally. Each parapodium with 2 spini-

gerous setae, blades about 51–54  $\mu\text{m}$  long; falcigerous setae, similar to spinigers but shorter, more strongly bidentated, with dorso-ventral gradation, 37  $\mu\text{m}$  above, 17  $\mu\text{m}$  below in midbody. Each anterior parapodia with three thin aciculae, only one in posterior parapodia, with rounded tip ending in a lateral, short mucron (Fig. 1d). Solitary dorsal simple setae from midbody, moderately thick, indistinctly bifid, edge heavily serrated (Fig. 1e). Solitary ventral simple setae on posterior segments, bidentate, with short subdistal spines (Fig. 1f). Pharynx long, everted in both specimens. Pharyngeal tooth located on anterior margin. Proventriculus somewhat shorter than pharynx, through about seven segments, with 30 muscle cell rows.

**Remarks.**—*Pionosyllis* is an heterogeneous genus, in need of revision (San Martín, 1984, 1990). Anterior end of *P. dionisi*, is similar to those of the species of the genus *Syllis*; however, the dorsal cirri of *P. dionisi* become immediately smooth and very short, similar to those of the Exogoninae, especially of several species of the genus *Sphaerosyllis*. Several *Pionosyllis* species have been described with dorsal cirri anteriorly articulated and posteriorly and midbody smooth, but none have such short smooth dorsal cirri. *Pionosyllis prope-weismanni* Dauvin and Lee, 1983, *P. gorrigensis* Hartmann-Schröder, 1977, and one species closely related to *Pionosyllis*, *Palposyllis prosostoma* Hartmann-Schröder, 1977 (San Martín and Aguirre-Zabalaga, 1988) are also species of the subfamily Eusyllinae, characterized by short, exogonid-like dorsal cirri from midbody. However, these three species have smooth anterior dorsal cirri, and the setae are shorter and unidentate. *Pionosyllis fusigera* Augener, 1913 has similar setae to those of *P. dionisi*, but the body is very different, with very thickened cirri, very short pharynx, and dorsum heavily colored.

**Etimology.**—The species is named in honor of Gustavo Pérez-Dionis who collected these samples.

***Syllis cruzi* new species**  
Figure 2a–j

**Material Examined.**—Agua Dulce (Tenerife); in sponge, *Corticium camdelabrum*; 5 m depth; holotype (TFMC AN 0180). Barranco Hondo (Tenerife); *Dendrophylia ramea*; 113 m depth; 1 paratype (TFMC AN 0188). Candelaria (Tenerife); *Dendrophylia ramea*; 115 m depth; 1 paratype (TFMC AN 0187).

**Description.**—Body elongated, cylindrical, without color, 9 mm long, 0.3 mm wide for 54 setigers. Prostomium semicircular, with four small eyes in trapezoidal arrangement. Antennae shorter than prostomium and palps; median antenna originating in front of posterior eyes, with about 15–17 articles; lateral antenna slightly shorter, originating in front of anterior eyes, with about 10 articles. Palps robust, triangular, fused at base, similar in length to prostomium (Fig. 2a). Tentacular segment about half the length of remaining segments; dorsal tentacular cirri longer than antennae, with about 16 articles; ventral tentacular cirri similar in length and number of articles to median antenna. Dorsal cirri first setiger slightly longer than long remaining dorsal cirri, with about 12 articles; dorsal cirri of middle segments somewhat shorter than body width, thin, alternating long dorsal cirri, with about 16–18 articles and short dorsal cirri with 10–12 articles. Parapodia short, with small distal papilla; ventral cirri digitiform, long, especially on anterior parapodia (Fig. 2b). Compound setae bidentate, falcigerous, with marked antero-posterior gradation in shape and size of articles. Anterior parapodia each with about 12 setae, with articles relatively thin, with short, moderate spines on cutting margin, except with some spinules long distally; proximal tooth well separated

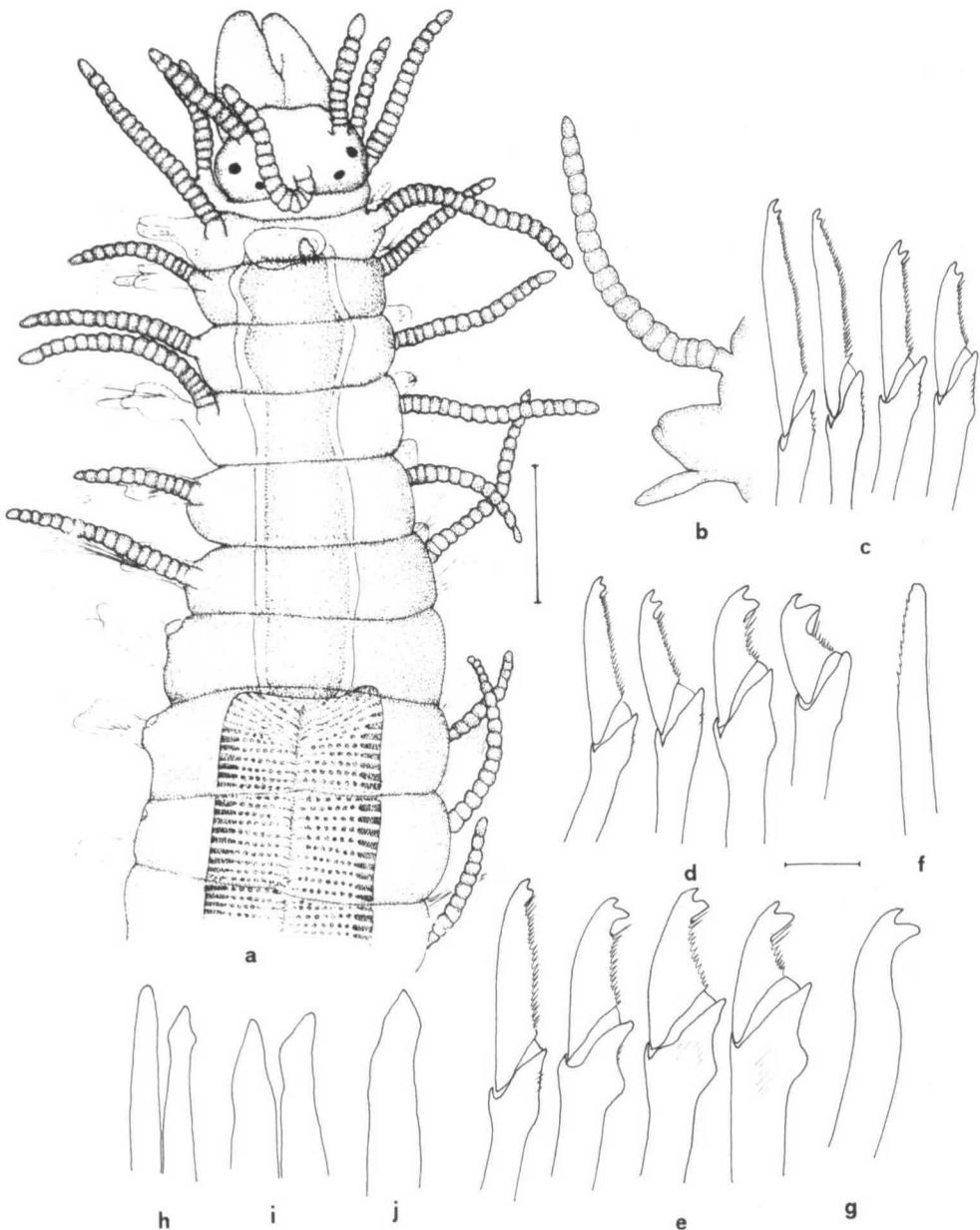


Figure 2. *Syllis cruzi* new species: a, anterior end, dorsal view of holotype; b, anterior parapodium; c, compound setae, anterior parapodium; d, compound setae, midbody parapodium; e, compound setae posterior parapodium; f, dorsal simple seta; g, ventral simple seta; h, anterior aciculae; i, aciculae, midbody; j, posterior acicula. Scale: a, 130  $\mu\text{m}$ . b, 32  $\mu\text{m}$ . c-j, 10  $\mu\text{m}$ .

from distal tooth, with teeth equal in size, or proximal tooth slightly larger than distal tooth on shorter, ventral setae; dorso-ventral gradation in length of blades, 34  $\mu\text{m}$  above, 19  $\mu\text{m}$  below. Articles progressively becoming wider and shorter with proximal tooth clearly larger than distal, with distal spines of cutting margin longer and shafts thicker, especially ventrally (Fig. 2c); median parapodia each

with about 10 setae, with articles 24  $\mu\text{m}$  above, 16  $\mu\text{m}$  below (Fig. 2d). Posterior parapodia each with 7–8 setae similar to those of midbody but provided with thicker shafts; proximal tooth much larger than distal tooth (Fig. 2e). Solitary dorsal simple setae on posterior setigers, unidentate or very indistinctly bidentate, with very faint spines on cutting margin (Fig. 2f); solitary ventral simple setae on posterior setigers, thick, strongly bidentate, smooth (Fig. 2g). Anterior parapodia each with three, then two aciculae, and only one in posterior parapodia, stout, somewhat acuminate (Fig. 2h–j). Pharynx relatively short, through about seven segments; pharyngeal tooth on anterior margin. Proventriculus similar in length to pharynx, through five segments, with about 31 muscle cell rows.

**Remarks.** — *Syllis cruzi* is similar to the species *Dentatisyllis caroliniae* (Day, 1973) (Perkins, 1981; Uebelacker, 1984), *S. glarearia* (Westheide, 1974) and *S. lutea* (Hartmann-Schröder, 1960) (Campoy, 1982; San Martín, 1984) in the shape of the compound setae. However, *S. lutea* has much longer spines on cutting margin of the blades, surpassing the level of proximal tooth and even reaching the distal tooth, and also has spiralized inclusions in the articles of dorsal cirri, lacking in *S. cruzi*. *Syllis glarearia* has longer cirri than *S. cruzi* and the dorsal simple seta is smooth and distinctly bidentate; they also differ in the details of compound setae. *Dentatisyllis caroliniae* differs from *S. cruzi* principally in having a trepan, whereas *S. cruzi* has a smooth anterior margin; also the ventral simple seta of *D. caroliniae* has subdistal spines and that seta is smooth in *S. cruzi*; dorsal simple seta of *D. caroliniae* is distinctly bidentate.

**Etimology.** — The species is named in honor of Tomás Cruz, marine zoologist and student of Canarian fauna.

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